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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/754,793	01/04/2001	James Allen Wambaugh	TH-1714 (US)	3251

7590 05/03/2005

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EXAMINER

TRAN, LEN

ART UNIT	PAPER NUMBER
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1725

DATE MAILED: 05/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/754,793

Applicant(s)

WAMBAUGH, JAMES ALLEN

Examiner

Len Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 5-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 5-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Addiego et al (US 6,623,707), and further in view of Lachman et al (US 4,912,077).

Addiego et al disclose a method for equalizing heat distribution across a catalyst in a tube reactor for dehydrogenation of ethylbenzene. The tube having a center and channels molded therein for directing a feed therethrough so as to direct the flow of heat toward the center, **inwardly or outwardly**, of the catalytic monolith. In addition, iron oxide is useful in the catalytic dehydrogenation of ethylbenzene to styrene (col. 1, lines 1-15 and figures).

Addiego et al fail to teach a ceramic monolith support impregnated with a catalytically reactive metal such as silver, nickel, cobalt, and molybdenum.

However, Lachman et al disclose the method of preparing a unitary composite structure exhibiting catalytic activity consisting essentially of silver, cobalt, nickel and molybdenum for the purpose of using in oxidizing, or in the alternative, reducing environments, and in thermally and mechanically stressful environments (col. 2, lines 1-58 and col. 1, lines 15-20).

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Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide a catalyst with precious metal as taught by Lachman, in Addiego et al in order to be used in thermally and mechanically stressful environment.

Response to Arguments

3. Applicant's arguments with respect to claims 1 and 5-23 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues that the claimed inventions are significantly different from the aforementioned features noted as being taught by the Addiego et al patent. One difference is in the design of the claimed tube reactor that **uses a monolithic support having uni- or multi-directional channels to direct the flow of heat within the monolith of the tube reactor** in order to equalize the temperature profile across the cross-section of the tube reactor. Another difference is that there is **no heat being introduced into or removed from the center** of the claimed tube reactor by a heat transfer means such as a steam coil. While the above distinction is agreed by the examiner, it is not in commensurate with the scope of the claims, since such argued features are not claimed. The amendment filed on 1/18/05 does not define over the prior arts of record.

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Len Tran whose telephone number is (571) 272-1184. The examiner can normally be reached on M-F, 8:30 - 5.

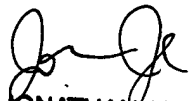
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Len Tran
Examiner
Art Unit 1725

LT
April 28, 2005


JONATHAN JOHNSON
PRIMARY EXAMINER